① Distribute, example $3(x+4) \Rightarrow 3x + 3\cdot 4 \Rightarrow 3x + 12$

(a) $4(x+2)$

$4x + 8$

(b) $3(5-x)$

$15 - 3x$

(c) $x(y+z)$

$xy + xz$

② The opposite of distribution is factoring. Example

$30 + 40 \Rightarrow 10(3+4)$

(a) $15 + 25$

$5(3+5)$

(b) $3x + 6$

$3(x+2)$

(c) $A + 0.5A$

$A(1+0.5)$

③ Solve for y

(a) $2x + y = 5$

$-2x \quad -2x$

$y = 5 - 2x$

(b) $\frac{3y}{3} = \frac{4+x}{3}$

$y = \frac{4}{3} + \frac{x}{3}$

$y = \frac{4}{3} + \frac{1}{3}x$

(c) $5x + 2y = 10$

$-5x \quad -5x$

$\frac{2y}{2} = \frac{10-5x}{2}$

$y = 5 - \frac{5}{2}x$

1. Give the starting value and constant multiplier for each sequence. Then find the 7th term of the sequence.

a. 16, 20, 25, 31.25, . . .

+4 +5 +6 → Not linear

16, 20, 25, 31.25

·1.25 ·1.25 ·1.25

20 ÷ 16 = 1.25

7th term = 54

57.5

48.43

61.035

b. 27, 18, 12, 8, . . .

$\frac{18}{27} = \frac{2}{3} \approx 0.\overline{66}$

7th → $2.\overline{370}$

4. Use the distributive property to rewrite each expression in an equivalent form. For example, you can write $500(1 + 0.05)$ as $500 + 500(0.05)$.

a. $75 + 75(0.02)$

b. $1000 - 1000(0.18)$

c. $P + Pr$

d. $75(1 - 0.02)$

e. $80(1 - 0.24)$

f. $A(1 - r)$

(a) $75(1 + 0.02)$

(b) $1000(1 - 0.18)$

(c) $P(1 + r)$

(d) $75 - 75 \cdot 0.02$

(e) $80 - 80 \cdot 0.24$

(f) $A - Ar$

$1000
Investment goes up by 0.05

1000 (E)

Ans(1 + 0.05)

Ans + Ans · 0.05

50 (E)

Ans(1 + 0.10)

60 (E)

Ans(1 − 0.13)

1350 (E)

Ans(1 + 0.07)

20000 − 20000 · 0.04

20000(1 − 0.04)

1100 (E)

Ans(1 − 0.75) (E)

Homework

7.1 #12 + 13